



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Telecommunications and**  
**Information Administration**  
Washington, D C 20230

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November 25, 2003

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Ms Marlene H Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S W  
Washington, DC 20554

*RE Amendment of Part 22 of the Commission's Rules to Benefit the Consumers of Air-Ground Telecommunications Services, Biennial Regulatory Review - - Amendment of Parts 1, 22 and 90 of the Commission's Rules, WT Docket No 03-103, Notice of Proposed Rulemaking*

Dear Ms Dortch

Enclosed please find an original and four (4) copies of the late-filed comments of the National Telecommunications and Information Administration in the above-referenced proceeding Two copies of these comments along with an electronic file on a diskette to Richard Arsenault, Wireless Telecommunications Bureau Two copies have also been sent to Qualex International

Please direct any questions you may have to the undersigned

Respectfully submitted,

Kathy Smith  
Chief Counsel

enclosures

cc Richard Arsenault

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

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In the Matter of )  
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Amendment of Part 22 of the Commission's Rules )  
To Benefit the Consumers of Air-Ground )  
Telecommunications Services )  
)  
Biennial Regulatory Review -- Amendment of )  
Parts 1, 22, and 90 of the Commission's Rules )

WT Docket No 03-103

**COMMENTS OF THE NATIONAL TELECOMMUNICATIONS  
AND INFORMATION ADMINISTRATION**

The National Telecommunications and Information Administration (NTIA) supports the efforts of the Commission to update Part 22 of its Rules through this rulemaking.<sup>1</sup> NTIA also applauds and encourages the close working relationship between the Commission and the Federal Aviation Administration on issues related to air flight safety.

NTIA's comments deal solely with the Commission's consideration of changes to emission masks for Public Mobile Services (PMS). The Commission asks whether it should continue to specify emission masks or use some other approach for PMS devices such as out-of-band emission (OOBE) limits.<sup>2</sup> As discussed below, NTIA recommends that the Commission use internationally recognized terms to characterize unwanted emissions and ensure its rules address all unwanted emissions.

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<sup>1</sup> *Amendment of Part 22 of the Commission's Rules to Benefit Consumers of Air-Ground Telecommunications Services, Biennial Regulatory Review - - Amendment of Parts 1, 22 and 90 of the Commission's Rules, Notice of Proposed Rulemaking, WT Docket No 03-103, 18 F C C Rcd 8380 (2003)*

<sup>2</sup> *Id.* at ¶ 38

## **I. The Commission's Rules Should Use to Internationally Recognized Terms.**

The International Telecommunication Union (ITU) Radio Regulations (RRs) define “out-of-band emissions,” “spurious emissions,” and “unwanted emissions” in RRs 1 144, 1 145, and 1 146.<sup>3</sup> The ITU uses the terms “out-of-band domain” (No 1 146 *bis*) and “spurious domain” (No 1 146 *ter*) to distinguish unwanted emissions based on their frequency. Limits in Sections I and II of Appendix 3 of the ITU RRs apply, respectively, to spurious emissions and to unwanted emissions in the spurious domain. The ITU does not specify emission limits for the out-of-band domain. NTIA recommends that the Commission consider using the ITU’s definitional approach to be consistent with international standards and to avoid misunderstanding by users in this community.

## **II. The Commission's Rules Should Address All Unwanted Emissions.**

The Commission’s emission masks are defined currently as multiple-component or step limits in Sections 22 357, 22 359, and 22 861 of the Commission’s Rules and cover the entire unwanted emission range of transmitting devices, which includes both spurious emissions and OOBEs. In this proceeding, the Commission seeks comments on eliminating these provisions and replacing them with OOBE limits.<sup>4</sup>

NTIA is concerned that the Commission’s proposal could be read to suggest that the Commission intends to eliminate restrictions on spurious emissions because the term “OOBE” has not traditionally covered both forms of unwanted emissions - - spurious emissions and

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<sup>3</sup> Out-of-band and spurious emissions are the two subsets of unwanted emissions. Spurious emissions are outside the necessary bandwidth and their level may be reduced without affecting the corresponding transmission of information. They include harmonic and parasitic emissions and intermodulations and frequency conversion products. Out-of-band emissions are immediately outside the necessary bandwidth and are the result of modulation process.

<sup>4</sup> *Id.* at ¶ 38.

OOBEs<sup>5</sup> Within a particular user's assigned frequency range and allocated band, users are generally motivated to control OOBEs to preclude intra-system interference and to use the band to its maximum practical extent. However, the same incentives do not exist between service providers in different services, and therefore, some form of spurious emission limits on transmitters in these bands would be appropriate. Moreover, unwanted emissions may fall beyond the edge of the band allocated to any specific service. In this case, out-of-band domain emissions from PMS operators close to the edge of an allocated band and spurious domain emissions from PMS operators throughout that band may cause interference into other bands. Specification of limits on all the unwanted emissions, both in the out-of-band domain and in the spurious domain, remains the best way to address that issue.

### **III. Conclusion**

NTIA therefore recommends that the Commission clarify the unwanted emissions to be covered by the term "OOBE" consistent with the ITU definition and also ensure that any rules adopted provide appropriate restrictions on all unwanted emissions. NTIA also recommends that the Commission should either maintain the masks or provide a set of out-of-band and spurious domain emission limits that can be applied to all PMS equipment. Given the need for improved spectrum efficiency and interference avoidance, the rules the Commission adopts should be both

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<sup>5</sup> The language in footnote 106 further confuses the issue by discussing OOBE in terms of a receiver's frequency, when OOBE is generally discussed in terms of transmitters. See *id.* at ¶ 38, n. 106.


consistent with the ITU rules and provide limits equal to or more stringent than the current  
Commission limits

Michael D. Gallagher  
Acting Assistant Secretary for  
Communications and Information

Fredrick R. Wentland  
Associate Administrator  
Office of Spectrum Management

November 25, 2003

Respectfully submitted,

  
Kathy Smith  
Chief Counsel

National Telecommunications and  
Information Administration  
U S Department of Commerce  
1401 Constitution Avenue, N.W.  
Room 4713  
Washington, DC 20230  
(202) 482-1816